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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,866	04/15/2004	Hakam D. Hussein	STL11730	7077

7590 05/02/2007

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EXAMINER	
RUTLAND WALLIS, MICHAEL	
ART UNIT	PAPER NUMBER
2836	
MAIL DATE	DELIVERY MODE
05/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/824,866	HUSSEIN ET AL.	
	Examiner	Art Unit	
	Michael Rutland-Wallis	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant requests withdrawal of the provisional obvious type double patenting citing MPEP 804, chart I-B. In response and after review of the stated chart Applicant is directed below chart I-B, MPEP 804 I B, 1 that in part states

> If "provisional" ODP rejections in two applications are the only rejections remaining in those applications, the examiner should withdraw the ODP rejection in the earlier filed application thereby permitting that application to issue without need of a terminal disclaimer.

As this instance is not present the previous double patenting rejection is maintained, as the rejection is consistent with chart I-B and section 804 of the MPEP.

Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

Claim 10 recites the limitation "the timer" in line 1. There is insufficient antecedent basis for this limitation in the claim and should be changed to "the first timer".

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4, 13, 17, 19 and 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 9, 13, 16 and 20 of copending Application No. 11/122,960. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

With respect to claim 1, 13 and 19 of the instant application recites similar limitations, recited in claims 1and 13 of Application 11/122,960, in line 9 of the instant application the limitations defining "a first and second time interval controlled by a first and second timer" is referred to as a "threshold resistance" where resistance is determined to be below or exceed said threshold in Application 11/122,960, a inrush limiting or protection determination of threshold resistance would take place in a time interval before the voltage reaches the threshold and thereby be limited after the threshold. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the connector recited in Application 11/122,960 for the impedance control circuit to limit current in the connection by controlling impedance during a time controlled by a RC timer circuit where the resistance in the system is below a threshold in order to protect the circuitry from large inrush currents.

With respect to claims 4, 17 and 21 of the instant application recites similar limitations, recited in claims 9, 16 and 20 of Application 11/122,960 with the exceptions of the Application 11/122,960 recites additional limitations requiring the inrush current limit circuit to control the current through the impedance after the first time interval. As the device of the instant applicant necessitates such a timing of the inrush current control circuit to limit the current after the connection of the device to a source of

energization, the limitations to further require such timing of the inrush current limit circuit would have been obvious to one of ordinary skill in the art in order to control the initial current supplied after the connection of the device to the energization source is complete.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 12-15, 17 and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Ngo (U.S. Pat. No 6,525,515)

With respect to claims 1, 13-15 and 19 Ngo teaches An inrush current controller for a device (hot-pluggable subsystem), comprising: a connector (i.e. positive and negative power connections) for plugging the device into a source of energization (input supply 42); an impedance (formed when item N40 conducts AC voltage) having a current input that couples to a first contact (negative power terminal) of the connector, an impedance control input (gate terminal), and a current output (source) coupling with the device; and an impedance control circuit (item 44) having a logic input (UVLO and

control input seen entering the upper portion of the control electronics) coupling to a second contact (positive power terminal) of the connector, and having an impedance control output (see exiting the right of the control electronics item 44) connected to the impedance control input (gate), the impedance control output forcing the impedance OFF during a first time (t0-t1) interval controlled by a first timer (item 57), and the logic input enabling a limited inrush (exponential rate of change col. 7 lines 43-48) at the current input during a second time (t1-t2) interval controlled by a second timer (formed with sensing input R40, item A2, N31 and R53 see col. 7 lines 40-45).

With respect to claim 3 and 20 Ngo teaches the impedance may continuously or step-wise variable (see Fig. 4 col. 7 lines 43-48) as a function of the control input.

With respect to claims 4, 17 and 21 Ngo teaches the first timer (item 57) couples to the current input (see Fig. 5) and the impedance control output (gate), and provides a first timer output that forces the impedance OFF during the first time interval (t0-t1); and an inrush current limit circuit (N40) coupled to the logic input and the impedance control output, and providing an inrush current limit (rate of change of voltage ramp) output controlled by the second timer (formed with sensing input R40, item A2, N31 and R53 see col. 7 lines 40-45).

With respect to claim 12 Ngo teaches the impedance comprises a transistor (N40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 5-11, 16, 18 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ngo (U.S. Pat. No 6,525,515)

With respect to claims 2 and 16 Ngo teaches the device may be a computer or other electronic system and the source of energization comprises a host system. Ngo does not describe a data storage device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ngo to further include the use of such a device if in fact such is not already present in Ngo in order to provide power safety to sensitive computing equipment.

With respect to claims 5 and 22 Ngo teaches the first timer (57) output controls the inrush current limit output to the impedance control output (see col. 9 lines 1-5). Ngo does not describe the control as an override instead teaches of the holding of the current limiting operation. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an override type control scheme in order to prevent the power form being supplied until the a reliable power signal has been determined.

With respect to claim 6 Ngo is silent on the logic of the circuit as being open or closed after the first time interval. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an open logic in order to signal the expiration of the first time interval in order to control the impedance and limit inrush current.

With respect to claims 7 and 23 Ngo teaches the inrush current limit output exponentially changes the impedance control output during a turn-on interval so that a device voltage has a slew rate (see Fig. 4). Ngo is silent on the range of 12 volts per 100 milliseconds, however It would have been obvious to one of ordinary skill in the art at the time of the invention to select components with such a time constant to operate with a slew rate of less than 12 volts per 100 milliseconds in order to protect the device of inrush currents.

With respect to claim 8 Ngo teaches the device has impedance that is partially inductive.

With respect to claim 9 and 24 Ngo teaches the timer resets automatically when the connector is disconnected from the source of energization (via startup timer and Auto-restart timer items 57 and 55).

With respect to claim 10, 18 and 25 Ngo teaches the use of a first timer a while Ngo is silent on the use of a transient signal to activate the timer. The timer disclosed in Ngo is triggerable by any voltage signal supplied to the input including that of a transient signal.

With respect to claim 11 Ngo teaches the logic input (sensing input of the control electronics) triggers the limited inrush when the logic input is open circuit, and when the logic input is at a high level.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRW

4/27/07

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